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ON THE DISCRIMINANT VALIDITY OF THE MEYER AND ALLEN MEASURE OF ORGANIZATIONAL COMMITMENT: HOW DOES IT FIT WITH THE WORK COMMITMENT CONSTRUCT?

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The purpose of this article is to examine the discriminant validity of the Meyer and Allen scales of organizational commitment and their relationships to commitment of different foci such as work involvement, job involvement, career commitment, and the Protestant work ethic. A total of 238 usable questionnaires were returned from nurses from two hospitals in western Canada. Results of confirmatory factor analysis (LISREL) and correlation analysis showed a good discriminant validity among the seven commitment foci; the three organizational commitment foci, and the four work commitment foci. The data also showed that the fit measures of the Meyer and Allen scales were better than those of the widespread Organizational Commitment Questionnaire (OCQ).

The topic of organizational commitment has continued to receive considerable attention from both academics and practitioners. Among all forms of work commitment, organizational commitment enjoys the most widespread popularity (Morrow, 1983). One reason for this attention is evidence showing that organizations whose members have high levels of commitment show higher performance and productivity, as well as lower turnover, absenteeism, and tardiness (Porter, Steers, Mowday, & Boulian, 1974; Wiener & Vardi, 1980). Despite the existence of alternative conceptualizations and measures of organizational commitment, the Organizational Commitment Questionnaire (OCQ) developed by Porter et al. (1974) has dominated the literature over the last 20 years. Most findings so far are based on that measure, as are

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the conclusions and future research agenda. But this measure has been criticized recently, mainly because of the overlap between some of its items with desired organizational outcomes such as turnover and performance (Reichers, 1985). As a result, a new trend has emerged in the definition and measurement of organizational commitment.

Based on the argument that organizational commitment can be better understood as a multidimensional concept, Meyer and Allen (1984) proposed a two-dimensional measure of organizational commitment. The first dimension was termed *affective commitment* and was defined as "positive feelings of identification with, attachment to, and involvement in, the work organization" (Meyer & Allen, 1984, p. 375). The second was termed *continuance commitment* and was defined as "the extent to which employees feel committed to their organizations by virtue of the costs that they feel are associated with leaving (e.g., investments or lack of attractive alternatives)" (Meyer & Allen, 1984, p. 375). In a subsequent article, Allen and Meyer (1990) added a third dimension: *normative commitment*, defined as the employees' feelings of obligation to remain with the organization. The factor analysis of Allen and Meyer (1990) supported the proposed three-dimensional scales. In their assessment of the scales, Hackett, Bycio, and Hausdorf (1994) also supported the existence of three dimensions. Despite the attention paid to the Meyer and Allen scales, one aspect that has not been examined is its relationship to commitment foci other than the organization and especially its discriminant validity.

In recent literature there has been a strong tendency to focus on the broader concept of work commitment that includes specific objects of commitment such as organization, occupation, union, and one's job (Morrow, 1983). Work commitment forms have been shown to predict important work outcomes such as withdrawal, performance, absenteeism, and tardiness (e.g., Wiener & Vardi, 1980). One important line of research regarding work commitment concentrated on examining its discriminant validity. This trend started with the work of Morrow (1983), who in a thorough review of the literature pointed to concept redundancy problems among a number of definitions and measures of work commitment foci. Morrow (1983) concluded that more attention to the way different measures of commitment are conceptualized and operationalized is warranted to prevent overlap among the concepts.

Following Morrow's (1983) suggestion, several studies examined empirically whether there is concept redundancy among different forms of work commitment (Brooke, Russell, & Price, 1988; Mathieu & Farr, 1991; Morrow & McElroy, 1986; Morrow & Wirth, 1989). In general, this research supported the independence of organizational commitment in relation to other forms of commitment. Its main conclusion was that job involvement, career salience, and work as a central life interest are marked by a fair amount of redundancy while the Protestant work ethic and organizational commitment are independent forms of work commitment.

However, all the above mentioned studies used the common Porter et al. (1974) scale in its long (15 items) or short (9 items) versions. Because of the growing attention to the Meyer and Allen (1984) measure of organizational commitment, it seems appropriate to test different aspects of its psychometric properties. All research to date has concentrated on exploring and/or establishing it as a three-dimensional construct. This article examines its relationship with other commitment foci, in particular its discriminant validity. The importance of such research has been emphasized in the literature regarding work commitment concepts and measures (Morrow, 1983; Morrow & McElroy, 1986). So far, the discriminant validity of organizational commitment has been assessed by using the Porter et al. (1974) measure (e.g., Brooke et al., 1988; Morrow & McElroy, 1986) that demonstrated a strong discriminant validity. The contribution of this study in that regard is in testing a measure of organizational commitment that is receiving growing attention in the literature. Exploring the discriminant validity of the Meyer and Allen scales and their relationships to commitments of other foci should guide and assist future research regarding the appropriateness of this scale relative to other common organizational commitment scales, the OCQ in particular.

Method

Participants

Nurses from two hospitals—one medium sized and one small—in western Canada were surveyed. Questionnaires were distributed to all nurses. In the first hospital, 157 completed usable questionnaires (52%). In the second hospital, 81 completed usable questionnaires (40%). A total of 238 usable questionnaires were returned for a response rate of 47%. Ninety-five percent of the nurses were females. The mean age of the respondents was 38.6 years and the mean tenure in the organization and occupation was 10.4 and 15.1 years, respectively. Of the nurses, 3.8% had completed only high school, 26.1% had a trade or vocational school, 55% had gone to college, and 15.1% had completed their degrees.

Measures

Two measures of organizational commitment were collected: the three eight-item scales of affective, continuance, and normative commitment of Allen and Meyer (1990); and the short 9-item version of the OCQ (Porter et al., 1974). Career commitment was measured by the eight-item measure developed by Blau (1985). Job involvement (10 items) and work involvement (6 items) were measured by methods developed by Kanungo (1982). The Protestant work ethic was measured by 10 items from the 19-item scale

developed by Mirels and Garrett (1971). All the work commitment constructs were measured on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Besides the commitment measures, several outcome variables were also collected. Perceived performance and perceived effort were measured by three-item measures developed in Hall and Hall (1976). In the two measures a 6-point scale was used (1 = *never*, 6 = *almost all the time*). Intention to leave the organization was measured by three items following Mobley, Griffeth, Hand, and Meglino's (1979) definition. The respondents were asked to indicate their agreement with the following three items on a 5-point scale: (a) I think a lot about leaving the organization; (b) I am actively searching for a substitute for the organization; (c) As soon as it is possible I will leave the organization.

Data Analysis

CONFIRMATORY FACTOR ANALYSIS

This analysis was performed following the procedure outlined by Brooke et al. (1988) and Mathieu and Farr (1991). Three indicators were established for each multi-item measure by first fitting a single-factor solution to each set of items and then averaging the items with highest and lowest loadings to form the first indicator, averaging the items with the next highest and lowest loadings to form the second indicator, and so on, until all items were assigned to one of the three indicators for each variable. This procedure was necessary to reduce the number of parameters estimated in the measurement models, reducing the scale items to three parallel indicators of each construct, in much the same manner that parallel test forms are developed (see Nunnally, 1978). The extent to which the three indicators tapped the more general underlying constructs was then assessed by fitting confirmatory factor analysis models. A covariance matrix of these indicators using listwise deletion of missing values formed the input for the LISREL analysis.

LISREL VII (Jöreskog & Sörbom, 1989) analysis was performed to test discriminant validity. Three confirmatory factor analyses were performed. The first tested the discriminant validity of the three-component model of Meyer and Allen (1984). The second tested the discriminant validity of work commitment model that includes the Meyer and Allen scales together with the other four forms of commitment: job involvement, career commitment, work involvement, and Protestant work ethic. The third tested the discriminant validity of a work commitment model that includes the Porter et al. (1974) scale together with the four forms of commitment mentioned above. The analysis of Meyer and Allen scales involved a comparison of the relative fit of three- and single-measurement models. The analysis for work commitment with the Meyer and Allen scales compared the relative fit of seven-, five-, and single-factor measurement models. The seven-factor model placed

the indicators of continuance—organizational commitment, affective organizational commitment, normative organizational commitment, career commitment, job involvement, work involvement, and the Protestant work ethic—on separate latent factors. The five-factor model was established by forcing the three scales of Meyer and Allen to a single factor and placing the 12 indicators of the remaining constructs on four additional factors. The single-factor model forced all 21 indicators to a single latent factor. The analysis for the Porter et al. scale involved a comparison of the relative fit of five- and single-factor measurement models. The five-factor model placed the indicators of organizational commitment, career commitment, job involvement, work involvement, and the Protestant work ethic on separate latent factors. The single-factor model forced all 15 indicators to a single latent factor. The fit of each measurement model was assessed with five indices: (a) the chi-square ratio, (b) the chi-square/degree of freedom ratio, (c) the goodness-of-fit (GFI) index, (d) the adjusted goodness-of-fit (AGFI) index, and (e) the root mean square residual (RMSR). Because the chi-square test is sensitive to sample size, the ratio of the model chi-square to degrees of freedom was used as another fit index. A ratio of less than 2.0 is considered a fairly good fit for the hypothesized model.

CORRELATION ANALYSIS

Convergence or divergence of the various work commitment forms was further examined using simple bivariate correlations. This procedure examined correlations between three work-related variables and the commitment forms. The analysis tested the hypothesis that the correlations between job-related variables and commitment forms were the same. Assuming that the measures assess distinct constructs, we would expect measures of these constructs to relate differently to measures of demographic and other job-related variables. As Brooke et al. (1988) pointed out, this procedure represents a more rigorous test of discriminant validity.

Results

Correlations

Table 1 shows the descriptive statistics, reliabilities, and intercorrelations among the research variables. Results show acceptable reliabilities of the measures of this study with somewhat low reliabilities of the continuance (.69) and normative commitment (.65) dimensions in the Meyer and Allen organizational commitment scales, and in the work involvement measure (.64). The correlations among the work commitment scales shows that the affective commitment dimension of the Meyer and Allen scales has the highest correlation with other commitments, such as job involvement ($r =$

.51), career commitment ($r = .47$), and work involvement ($r = .41$). Using Morrow's criteria of size of correlations between .6 to .8 as evidence for overlap, no such conclusion can be made, although some attention should be paid to the high correlation with the job involvement measure. The correlation of normative commitment with other commitment measures did not exceed $r = .3$ and therefore provides support for the discriminant validity of that dimension. An interesting result is the lack of a significant relationship between the continuance commitment dimension and any of the research variables, particularly as regards the commitment measures. The correlations were extremely low and did not exceed .10.

The three scales of the Allen and Meyer measure (1990) show a different pattern of relationship with the variable intention to leave the organization: a low and insignificant relationship with continuance commitment ($r = -.08$), moderate and significant with normative commitment ($r = -.20$), and somewhat high and significant with affective commitment ($r = -.45$). The OCQ shows a stronger relationship with this variable ($r = -.53$) whereas the other commitment foci, except the Protestant work ethic, show a significant relationship with intention to leave, although lower than that with the affective commitment scale. Except for the positive and significant relationship of affective commitment with perceived performance ($r = .14$), there were no relationships between the Meyer and Allen scales and the variables perceived effort and perceived performance. Except for career commitment ($r = .16$), all the other commitment foci are not related to perceived effort and perceived performance.

Confirmatory Factor Analysis

The first confirmatory factor analysis aimed to establish the discriminant validity of the three-component commitment model of Meyer and Allen. The results of this analysis showed a poor fit to the data of a one general factor model ($\chi^2 = 119.46$, $p < .001$; $\chi^2/df = 4.42$; AGFI = 0.818), and a good fit to a three-factor model ($\chi^2 = 45.42$, $p < .01$; $\chi^2/df = 1.89$; AGFI = 0.919). Thus, in accordance with previous research (Hackett et al., 1994), the three-component model of organizational commitment was supported by the data. Table 2 shows the results of confirmatory factor analysis for work commitment with the Meyer and Allen scales. Three alternative models were tested: a seven-factor model that represents Meyer and Allen's proposed model, a five-factor model that combines Meyer and Allen three dimensions into one scale, and a one-factor model. Results in Table 2 clearly show that the seven-factor model fits the data better than the others. All the fit measures in the seven-factor model are better than those in the other models (χ^2/df ratio = 1.73, RMSR = .384, GFI = .888). These fit measures are better than those in the one-factor or the five-factor model.

Table 1
Descriptive Statistics, Reliabilities, and Intercorrelations Among Research Variables (reliabilities in parentheses)

Meyer and Allen Scale	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Affective Commitment	32.69	7.87	(.79)										
2. Continuance commitment	40.08	7.41	.02	(.69)									
3. Normative commitment	29.76	6.26	.54***	.06	(.65)								
4. OCQ	38.88	8.19	.78***	.08	.51***	(.83)							
5. Work involvement	18.41	4.81	.41***	.05	.33***	.39***	(.64)						
6. Job involvement	32.84	8.25	.51***	.07	.36***	.48***	.64***	(.79)					
7. Career commitment	36.99	9.31	.47***	-.10	.26***	.46***	.40***	.57***	(.87)				
8. Protestant work ethic	35.05	8.79	.09	.06	.17**	.08	.33***	.27***	.12***	(.76)			
9. Perceived effort	14.65	3.39	.06	-.02	.02	.04	.01	.03	.07	.01	(.67)		
10. Perceived performance	15.73	2.73	.14*	-.10	.05	.13*	.06	.11	.16*	-.04	.55***	(.91)	
11. Intention to leave the organization	11.52	2.72	-.45***	-.08	-.20**	-.53***	-.18**	-.30***	-.36***	-.01	.01	-.07	(.82)

Note. $n = 221$ -238 due to missing values.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2
*Confirmatory Factor Analysis Results of Work Commitment
 With the Meyer and Allen (1984) Scales*

Model/Description	<i>df</i>	χ^2	χ^2/df	RMSR	GFI	AGFI
Seven factors	168	290.08***	1.73	0.384	0.888	0.846
Five factors (the three scales of Meyer and Allen combined to one scale)	179	387.23***	2.16	0.492	0.854	0.812
One factor	189	854.77***	4.52	0.735	0.685	0.616

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3
*Confirmatory Factor Analysis Results of Work
 Commitment With the Porter et al. (1974) Scale*

Model/Description	<i>df</i>	χ^2	χ^2/df	RMSR	GFI	AGFI
Five factors	80	201.64***	2.52	0.458	0.889	0.833
One factor	90	650.40***	7.23	0.921	0.671	0.562

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3 shows the results of confirmatory factor analysis for the Porter et al. (1974) scale. Two alternative models were tested: a five-factor model and a one-factor model. Results in Table 3 show that the five-factor model fits the data better than the one-factor model. The fit measures in the five-factor model are better than those in the one-factor model (χ^2/df ratio = 2.52, RMSR = .458, GFI = .889). These fit measures are better than those in the one-factor model. However, the overall fit measures of the seven-factor model, which include the Meyer and Allen scales (see Table 2), are better than those of the five-factor model, which include the Porter et al. scale (see Table 3). For example, the χ^2/df is below 2 for the Meyer and Allen (1.73) model and above 2 for the Porter et al. model (2.52). The RMSR and the AGFI are higher for the Meyer and Allen model than for the Porter et al. model.

Discussion

In general, the findings of this study show that the Meyer and Allen scales (1984) of organizational commitment can be integrated into the work commitment concept without increasing concept redundancy as a result of switching from the Porter et al. (1974) scale to those of Meyer and Allen. This conclusion was supported by the confirmatory factor analysis, which

revealed acceptable discriminant validity of work commitment constructs with the three-component model of organizational commitment of Meyer and Allen (1984). The seven-factor model revealed a better fit to the data than a five-factor model, which combined the three commitment scales into one. In addition, the seven-factor model produced better fit measures than a five-factor model, which includes the Porter et al. commitment scale. The correlation analysis also showed a different pattern of relationship between the work-related variables and the Meyer and Allen scales as well as the other work commitment scales tested here.

However, the fit measures of the work commitment model with the Meyer and Allen scales are not perfect. They are better than those with the Porter et al. (1974) scale but need to be improved before one can conclude that they show good discriminant validity as regards work commitment constructs. The limitations of this study are linked to possible ways to improve its fit measures. First, the findings need to be replicated in other work settings and occupational groups before firm conclusions can be made regarding the discriminant validity of the constructs examined. Consistency in the results across different settings is important to establish the discriminant validity of the commitment forms examined here, particularly in the light of the somewhat low response rate (47%). An important and related issue is the measures for the different constructs. The measures applied in this study, in addition to the three organizational commitment scales of Meyer and Allen, are extensively used in commitment research. But different measures for the constructs applied here should also be tested in future replications. However, despite their limitations, the findings here are important in that research regarding work commitment can apply the scales of Meyer and Allen as the organization foci commitment, aware that the discriminant validity of the constructs was not disturbed but even improved in comparison to the Porter et al. scale. However, more conceptual as well as more empirical examinations are needed regarding the Meyer and Allen scales to replicate and improve our findings before reaching any firm conclusions regarding the discriminant validity among the measures tested here.

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